

What is claimed is:

1. A telescope comprising

an elongate telescope tube;

a mount for supporting said telescope tube for altitude and azimuth positioning,

said mount comprising an azimuth assembly and an altitude assembly supported on

said azimuth assembly comprising a horizontal platform rotatable about a vertical

azimuth rotation axis, a pair of vertical bearing holders supported on said platform in

spaced parallel relation, each of said bearing holders having a track defining a concave

configuration, said altitude assembly comprising a pair of vertical bearings

interconnected in parallel spaced relation to receive said telescope tube therebetween,

each of said bearings having a circumferential contact surface and a circumferential lip

extending outwardly from said contact surface, said contact surfaces defining a convex

configuration complementary to said concave configuration of said tracks, said bearings

being rotatable relative to said bearing holders about an altitude rotation axis

perpendicular to said azimuth rotation axis with said contact surfaces rotatably

supported on and in alignment with said tracks, respectively, and said lips disposed

over outer surfaces of said bearing holders, respectively; and

a frictional adjustment mechanism carried by said azimuth assembly and

comprising an extension element having an end surface selectively extendable into

frictional contact with one of said lips to maintain alignment of said contact surfaces on

said tracks.

1 2. The telescope recited in claim 1 wherein said contact surfaces are made
2 of Teflon and each of said tracks comprises a low friction surface along an upper
surface of said bearing holder.

1 3. The telescope recited in claim 2 wherein each of said low friction surfaces
2 comprises a plurality of individual low friction surfaces spaced from one another along
3 said upper surface of said bearing holder.

1 4. The telescope recited in claim 1 wherein said frictional adjustment
2 mechanism further includes a shoulder on said azimuth assembly spaced from said
3 outer surface of said bearing holder corresponding to said one of said lips to define a
4 slot between said shoulder and said outer surface of said bearing holder corresponding
5 to said one of said lips, said one of said lips being captured in said slot between said
6 shoulder and said outer surface of said bearing holder corresponding to said one of
7 said lips, said extension element passing through said shoulder with said end surface
8 selectively extendable into said slot.

1 5. The telescope recited in claim 4 wherein said extension element is
2 threadedly received in a threaded passage through said shoulder.

1 6. The telescope recited in claim 5 wherein said end surface includes a
2 frictional end surface.

1 7. The telescope recited in claim 1 wherein each of said tracks has forward
2 and rearward outer ends at which said track is the greatest distance from said platform,
3 and said extension element is disposed at one of said forward or rearward outer ends
4 of said track of said bearing holder corresponding to said one of said lips.

1 8. The telescope recited in claim 1 wherein said frictional adjustment
2 mechanism is a first frictional adjustment mechanism, said extension element is a first
3 extension element and further comprising a second frictional adjustment mechanism
4 comprising a second extension element having an end surface selectively extendable
5 into frictional contact with the other of said lips.

1 9. The telescope recited in claim 1 wherein said altitude assembly is
2 removable from said azimuth assembly.

1 10. A telescope comprising
2 an elongate telescope tube having a central longitudinal axis;
3 a mount supporting said telescope tube for altitude and azimuth positioning, said
4 mount comprising an azimuth assembly and an altitude assembly supported on said
5 azimuth assembly, said azimuth assembly comprising a horizontal platform rotatable
6 about a vertical azimuth rotation axis, a pair of vertical bearing holders supported on
7 said platform in parallel spaced relation, said altitude assembly comprising a pair of
8 vertical bearings interconnected in parallel spaced relation, said bearings being

9 supported on said bearing holders for rotation about an altitude rotation axis

10 perpendicular to said azimuth rotation axis; and

11 a clamp assembly disposed between said bearings and comprising a plurality of
12 longitudinally spaced clamp members selectively pivotal between open and closed
13 clamp positions and an actuating mechanism for pivoting said clamp members between
14 said open and closed clamp positions, each of said clamp members having an aperture
15 through which said telescope tube extends, said telescope tube being movable
16 longitudinally along said central longitudinal axis and being rotatable about said central
17 longitudinal axis within said apertures when said clamp members are in said open
18 clamp position, said telescope tube being prevented from moving longitudinally along
19 said central longitudinal axis and being prevented from rotation about said central
20 longitudinal axis within said apertures when said clamp members are in said closed
21 clamp position, said actuating mechanism including an actuating member
22 interconnecting said clamp members for pivotal movement between said open and
23 closed clamp positions and an operating member for operating said actuating member
24 to move said clamp members between said open and close clamp positions.

1 11. The telescope recited in claim 10 wherein said plurality of clamp members
2 comprises a forward clamp member and a rearward clamp member pivotal in opposition
3 to one another, each of said clamp members being pivotal about a pivot axis parallel to
4 said altitude rotation axis and perpendicular to said central longitudinal axis of said
5 telescope tube, said clamp members being pivotally connected to said bearings along
6 said pivot axes, respectively.

7 12. The telescope tube recited in claim 11 wherein said clamp members are
8 perpendicular to said central longitudinal axis with said apertures presenting a modified
9 elliptical configuration perpendicular to said central longitudinal axis in said open clamp
10 position, said clamp members being non-perpendicular to said central longitudinal axis
11 with said apertures presenting a modified circular configuration perpendicular to said
12 central longitudinal axis in said closed clamp position.

1 13. The telescope recited in claim 11 wherein said actuating mechanism
2 includes a forward pivot mounted to an upper end of said forward clamp member and a
3 rearward pivot mounted to an upper end of said rearward clamp member, and said
4 actuating member includes a selectively rotatable shaft connecting said pivots for
5 moving said upper ends toward one another to pivot said clamp members from said
6 open clamp position to said closed clamp position and moving said upper ends away
7 from one another to pivot said clamp members from said closed clamp position to said
8 open clamp position in response to rotation of said shaft.

1 14. The telescope recited in claim 13 wherein said altitude assembly further
2 includes a plurality of connecting rods extending perpendicularly between said
3 bearings, said connecting rods being arranged as a triangle with an upper one of said
4 connecting rods disposed above said telescope tube and two lower ones of said
5 connecting rods disposed below said telescope tube, said lower connecting rods being
6 disposed between said pivot axes.

1 15. The telescope recited in claim 13 wherein said operating members
2 includes a handle for rotating said shaft to effect operation of said actuating member.

1 16. A telescope comprising
2 an elongate telescope tube having a central longitudinal axis and comprising a
3 plurality of elongate wooden slats and a like plurality of elongate wooden ribs
4 interconnecting said slats to approximate a cylinder, each of said slats being planar and
5 having an internal surface facing said central longitudinal axis, an external surface
6 opposite said internal surface, and parallel sides connecting said internal surface to
7 said external surface, each of said ribs being planar and having an interior surface
8 facing said central longitudinal axis, an exterior surface opposite said interior surface,
9 parallel sides connected to said exterior surface at outer corners and connected to said
10 interior surface at inner corners, and opposed slots extending along said sides of said
11 rib, respectively, with said slots extending in said rib angularly inwardly in opposite
12 directions toward one another at the same angle from said inner corners, each of said
13 slats being disposed between a pair of adjacent ones of said ribs with one of said sides
14 of each of said slats received in a corresponding one of said slots of said adjacent ones
15 of said ribs; and
16 a mount for supporting said telescope tube for altitude and azimuth positioning.

1 17. The telescope recited in claim 16 wherein said slots of each of said ribs
2 are disposed at an angle of 15° to said exterior surface of said rib.

1 18. The telescope recited in claim 16 wherein said slats have a thickness
2 between said internal and external surfaces, said ribs have a thickness between said
3 interior and exterior surfaces, said thickness of said ribs is greater than said thickness
4 of said slats, said ribs forming longitudinally extending protrusions along the exterior of
5 said telescope tube.

1 19. The telescope recited in claim 16 wherein said exterior surfaces of said
2 ribs are planar and said planes of said exterior surfaces of adjacent ones of said ribs
3 intersect at an angle of 30°.

1 20. The telescope recited in claim 16 wherein said cylinder includes a forward
2 end and a rearward end, and said telescope tube further includes end rings at said
3 forward and rearward ends, respectively.